A Taxonomy: Evaluating Reading Comprehension in EFL

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About 400 million people in the world today use English as a second or foreign language. Many of these people are professionals whose success or failure may well depend on their ability to read the latest scientific and technical publications in English. For this reason courses whose specific objective is the reading of scientific and technical texts are becoming more and more common in universities and technical colleges throughout the world.

Venezuela is no exception. At the Simón Bolívar University in Caracas, the first year English program is composed of three courses designed by language department professors to meet the needs of students who will major in different areas of science and technology. The main objective of these courses is to develop the skill of reading scientific and technical texts in English since students will be expected to understand English books and journals for their undergraduate studies and research, and later on in their professional activities.

Due to the importance of reading in English in today's scientific world, the three courses are obligatory for all first year students. They are taught each term to approximately 1,000 students divided into 30 to 36 sections taught by 18 to 20 professors. This situation created the need to impose some type of standardized criteria to assure the achievement of a similar level among all students. It was therefore decided to administer two departmental exams each term. At first, controlled open-ended questions were used. To validate the correction of the exams, groups of exams were exchanged among different professors. Each professor corrected one lot and then checked her own group of tests. In spite of the control over the type of questions and the list of correction rules, it was found that professors graded the exams differently. Another problem with this type of exam was the difficulty of distinguishing between reading and writing. Students were being penalized for errors in writing, when what we really wanted to test was reading.

In an attempt to solve these problems, in 1978 the language department started to use multiple–choice questions. This type of objective question separates reading from writing skills and presents a series of advantages over open-ended questions. These advantages are the following: a) high corrector reliability, b) easy implementation, c) quick and easy collection, and d) easy determination of difficulty and discrimination levels.

It was also decided to use modular type questions, i.e., short independent texts for each question, rather than one or two longer readings, followed by numerous questions. By using 20 to 25 short texts on a variety of technical topics, we hoped to compensate for any advantage previous knowledge of a specific subject might afford a particular student. It should be pointed out that in our first year courses, students who will later major in different areas of pure science or engineering are mixed together in the same classes, so interests and background knowledge are diverse. The use of modular items also reduces the possibility of inter-item dependence, a condition which can reduce the discriminative ability of the items, and, therefore, the reliability

of the scores (Haladyna 1994). Finally, the use of 20 to 25 different texts reduces the possibility that students will remember the questions and communicate this information to others.

The efficiency of multiple-choice items depends, to a great extent, on their design. The options of a good question must be plausible cognitive tasks related to and derived from the content of the text. The syntactic and semantic form of the questions must differ from that of the text so that students must understand the context rather than simply recognize the form to answer the question correctly. However, since the options are prefabricated answers, they may reduce the interaction between reader and text and deter the interpretation process (Widdowson 1978). But after considering the advantages and disadvantages for our particular situation, we decided that multiple-choice items were the most objective and efficient way to measure the reading skill in large groups of students. Because of their limitations, however, the weight of these exams is only 50% of the final grade, allowing teachers to complete the total grade with other types of evaluations.

In recent years more than 1,200 questions have been collected, so it has become necessary to organize these questions and create a computerized program which could store them and prepare an exam by selecting the most appropriate questions to be used in a given evaluation. For this purpose, the following taxonomy was designed.

The Taxonomy

A multiple-choice item used to test reading comprehension usually consists of three parts: the reading text, the question or stem, and the options. Although several taxonomies exist, most describe only the type of question or stem making no reference to the nature of the reading text or the option, and most refer to open-ended questions rather than multiple-choice items.

The first taxonomy, and probably the best known, was published by Bloom et al., in 1956. The main purpose of this taxonomy was to classify educational objectives, but it was later also applied to the areas of instruction and evaluation. It is divided into three large areas or domains: (a) the cognitive domain, (b) the affective domain, and (c) the psychomotor domain. The cognitive domain refers to the intellectual activities involved in learning and is composed of a six-level hierarchy: knowledge, comprehension, application, analysis, synthesis, and evaluation. This taxonomy was very influential since it emphasized the complexity of the cognitive activities involved in learning and the fact that all must be taught and evaluated. The limitations, for our own purposes, are that it includes far more than reading comprehension and does not include those specific processes involved in the understanding of a written text.

In 1978, Herber tried to relate Bloom's categories to three levels of reading comprehension: (a) literal comprehension, (b) interpretive comprehension, and (c) applied comprehension. Literal questions require the reader to recall or recognize information explicitly presented in the reading material. Interpretive questions ask for a paraphrase, explanation, inference, conclusion, or summary. Applied questions utilize the readers' background knowledge and lead them to evaluate, elaborate, predict, or solve problems based on implicit information in the text.

Pearson and Johnson (1978) present a taxonomy of word comprehension tasks with nine levels and a taxonomy of propositional comprehension tasks also containing nine categories. Their question taxonomy, however, consists of only three levels: (a) textually explicit questions, (b) textually implicit questions, and (c) "scriptally" implicit questions. The definitions of these categories correspond roughly to those of Herber and to what Gray (1960) has called to "read the lines, read between the lines, and read beyond the lines." In contrast to the taxonomy presented by Bloom et al., these two taxonomies refer specifically to reading comprehension and are important because they emphasize the relationship between the question and the source of the answer, thus reflecting the relationship between the text and the reader. For our purposes, however, both are too general.

Barrett's taxonomy also refers to questions related to reading comprehension and is far more detailed than the ones mentioned above. Barrett proposes four main categories: (a) literal recognition or recall, (b) inferences, (c) evaluation, and (d) appreciation. Each level contains between four and eight categories. As the reader will see, some of these categories are similar to those mentioned in our taxonomy. For example, Barrett mentions recognition or recall of sequence (1.3.) and/or cause and effect relationships (1.5.). Our taxonomy also deals with these and other rhetorical patterns, but only at the level of recognition since it refers only to multiple-choice items, not open-ended questions. Another difference between our system and that of Barrett is that several of Barrett's categories refer to the analysis of literary texts (i.e., 4.2. identification with characters and incidents). Since our taxonomy was designed for scientific and technical readings, it contains no such categories.

Elijah and Legenza (1975) present a taxonomy based largely on Barrett's (1968) and Sander's (1966) publications. They also describe four main levels of comprehension (literal, interpretive reaction, and application), with numerous subcategories. This system mentions several tasks not taken into account by Barrett such as interpreting unfamiliar words (1.B.1.) and summarizing (1.C.2.). However, it includes numerous activities which could not be tested using multiple-choice items.

Irwin's taxonomy (1986) best reflects the interactive theory of reading comprehension. Irwin separates questions at the level of micro-information (concerning word meaning or syntactic relationships) from questions at the level of macro-information (main ideas summaries). Although this taxonomy contains numerous categories which would be useful in classroom discussions, they would not be applicable in multiple-choice exams. For example, Irwin mentions previous knowledge and metacognitive processes in her system. These types of questions would certainly be very important in teaching the mental processes needed to understand a reading ("comprehending"), but not to measure the level of understanding which has taken place ("comprehension") (Chapman 1976). It should also be pointed out that although our system uses some of the same terms Irwin uses, the meaning of these terms is not necessarily the same in both taxonomies.

While these and other taxonomies classify types of questions, without mentioning the text and options, Arcay and Cossé (1992) present a system which categorizes certain types of texts. Their system groups both fictional and non-fictional texts according to form, content, and organization. Arcay and Cossé's taxonomy includes many more areas of form and content than ours but in a

more general form. They make no attempt to classify comprehension questions referring to these texts.

After reviewing these and other taxonomies, it became evident that none satisfied our needs regarding a system to classify multiple–choice items used to test reading comprehension of scientific and technical texts. We therefore decided to design our own taxonomy for this purpose. Since most of the items which we use contain three parts (the reading text, the stem, and the options), our system takes these three main areas into consideration. Furthermore, it takes into account the interactive and constructivist reading models on which the first year program is based (Rumelhart 1977; Stanovich 1980; Flower and Spivey in Cornish 1991; Goodman in Carrell et al., 1988; Widdowson 1984, 1990). These models present reading as a dynamic process where bottom-up and top-down processes interact to create meaning.

The following taxonomy (Figure 1 below) which we created to overcome some of the limitations of existing versions will be described below.

The Reading Text

Four basic criteria are used to classify the reading text: A. Subject, B. Rhetorical Patterns, C. Sources, and D. Form.

The first general category (A. Subject) is further divided into three main groups: (1) Humanities and Social Sciences, (2) Physical Sciences, and (3) Biological Sciences, each of which is broken down into specific disciplines. Due to the growing interdependence of many fields nowadays, which is reflected in many of the reading texts, a reading may be classified as belonging to more than one subject category. For example, a text describing the use of computers in education would be classified under systems engineering (computers) (I.A.2.b.1.g.) as well as education (I.A.1.5.). The category "others" exists throughout the system to include texts or questions which exemplify a complex combination of several categories or which illustrate unique areas not frequent enough to merit a separate category.

The text is also classified according to the predominating rhetorical pattern. The study guide used in the first two trimesters of the reading course is organized around the patterns most commonly found in scientific and technical writing. The patterns selected to classify the reading text closely follow those which are emphasized in class: definition, static description, classification, comparison-contrast, chronology, process, cause-effect, hypothesis, argumentation, and exemplification.

The final two categories refer to source and form. The source is identified according to the style in which the text is written and the type of information which appears. For example, a textbook would be written in an objective style and contain explanations of basic concepts, well-known and generally accepted information, whereas a journal would describe recent investigations or discoveries and be written in technical language for specialists and researchers. The form refers to the graphic appearance of the text. It may be an extract from an article or book, a list of

sentences to be placed in the correct order, a table or graph, a page from a dictionary, an abstract, etc.

The Question (stem)

The question may take one of several forms. It may be a sentence separate from the text which must be completed with one of the options. It may be in the form of a question to be answered by an option, or it may take the form of instructions such as the following: "Form a coherent paragraph by choosing the correct order of the following sentences." There may simply be a blank space left in the reading text which must be completed with one of the options.

Regardless of the form the question may take this part of the classification system attempts to categorize the cognitive process the reader must undergo to reach the correct answer. Frequently in order to decide which category is appropriate, one must look not only at the question but also at the text and options to see if the information needed is explicit or implicit, for example. To categorize the question, it is necessary to consider not only the type of information requested, but also the relation between the question and the source of the answer.

The classification of the question has been divided into two general categories: A. Micro-information and B. Macroinformation. Questions which belong to the first category can be answered by understanding or recognizing only specific sentences, phrases, or key words of the text. The reader does not necessarily have to read or understand the entire text but must be able to identify those parts of the reading referred to in the questions. For this task the reader depends mainly on his linguistic schemata (vocabulary and grammar). S/he must be able to group words together to form meaningful phrases and recognize syntactic relationships. In these tasks, bottom-up processing is very important. To answer a question classified as Macroinformation, the reader must read the entire text and integrate information found in different parts of the reading. In order to do this, s/he must draw upon his/her formal and content schemata. In these tasks, the importance of top-down processing becomes evident.

A. Microinformation: Within the category of Microinformation, the taxonomy includes thirteen tasks which a reader may be asked to perform. Regarding vocabulary, a reader may be asked to determine the meaning of a word based on the context in which it appears (II.A. 1.). In this type of question, the options all contain valid definitions of the word, so the question does not become a simple dictionary exercise. In category II.A.2., the reader is asked to identify the word or phrase which a particular noun or pronoun refers to, thus establishing cohesive relationships of an anaphoric or cataphoric nature.

In order to demonstrate his/her comprehension of the relationship among the different propositions presented by the author, the reader may be asked to select the appropriate connector or the appropriate usage of a given connector (II.A.3.). For example, by choosing the connector "nevertheless" in the following blank, the reader is demonstrating his/her recognition that the relationship between the first and second parts of the sentence is one of contrast:

The results were convincing; _____, further evidence from research was called for.

To determine if the reader has comprehended explicit information which appears in the text, s/he may be asked to select the most appropriate paraphrase for this information or simply to recognize the answer in specific parts of the text (II.A.4.). Category II.A.5. refers to items in which the stem appears in the form of a question, and the reader is asked to demonstrate understanding of explicitly stated facts in the reading.

The next eight categories require the reader to recognize the different rhetorical patterns used by the author. The reader may be asked to identify the words which are defined in the text (II.A.6.); to recognize the elements being compared, the basis for the comparison, or the relationship between two or more elements being compared (similarities or differences) (II.A.7.); to recognize the criteria used by the author to classify specific elements and for the relationship between these elements (II.A.8.); to recognize the sequence (chronology or process) used by the writer, or to recognize the sentence which appropriately describes the relationship between steps or stages in the sequence (II.A.9.). The reader may also be required to distinguish between reasons or motives and consequences clearly and explicitly described in the text by identifying the cause and or effect of a particular action or event (II.A.10.), identify an idea as having been presented in the original text in the form of either fact or hypothesis (II.A.11), or identify what is being described in the reading (II.A.19.). Finally, the reader may be asked to identify the rhetorical function of the text. In these questions the options do not include information specific to the particular text. The reader would simply recognize key words indicating specific functions (II.A.13.).

B. Macroinformation. The category of Macroinformation is broken down into Analyze and Interpret. In questions which fall into the first of these categories, Analyze, the reader must examine and relate information which is explicitly present in different sections of the text. In addition to linguistic schemata, the reader must also utilize his/her formal schemata (Carrell et al., 1988) regarding the rhetorical organization of different types of texts. In questions classified in the second group, Interpret, the reader must go beyond the explicit information found in the text. S/he must elaborate, infer, or predict. In order to do this, s/he must rely heavily on content schemata.

1. Analyze. There are eight possible tasks within the category of Analyze. The reader may be asked to place a list of sentences in the correct order to form a coherent paragraph (II.B.1.1.). To do this, s/he must recognize the different indicators of text cohesion and identify propositional relationships between sentences at various levels.

To evaluate if the reader is able to transcode information from a text to a graph or diagram, s/he may be asked to recognize the most appropriate graphic representation of the information presented verbally in the reading (II.B.I.9.). S/he may also be required to select the best verbal interpretation of information which appears in a table or diagram (II.B.1.3.)

In some cases, the reading material may be composed of two short texts from different sources. In these instances the readings describe two different ideas, theories, or opinions on a given subject. The reader is asked to compare some aspect of the two texts (style, concepts presented, source, author's purpose, etc.) (II.B.1.4.).

Two types of questions require the reader to recognize the structure or organization of the entire text. In the first, the reader must recognize textual inconsistencies. In these questions s/he is required to identify the sentence or idea which does not fit into an otherwise coherent paragraph, based on inconsistencies of either a linguistic or conceptual nature (II.B.1.5.). In the second, the reader must identify the logical progression of the text; s/he must recognize the manner in which the author presents his/her ideas (for example, inductively or deductively), or the order in which they appear (II.B.1.6.).

The two last categories under Analyze test for comprehension of explicit ideas presented in the reading. In II.B.1.7., the reader must integrate information explicitly present in different parts of the text in order to draw a conclusion and/or deduction. In II.B.1.8., the reader is asked to predict what follows the information that is presented in the text. This may take the form of completing the last sentence of the reading or predicting what the next sentence or next paragraph will probably deal with.

2. Interpret. The category of Interpret includes eleven possible tasks. In II.B.2.1., the reader is requested to identify the main idea of the reading, i.e., the message which the author wants to transmit. Regarding this category, we agree with the interpretation of Pearson and Johnson rather than that of Barrett. Barrett specifies two categories: 1.2. recognition or recall of main ideas and 2.2. inferring the main idea. By using only one category for identification of the main idea, our taxonomy reflects the opinion of Pearson and Johnson, who believe that almost all main ideas are inferences, even when they are explicitly stated in the text. The reason for this is that there are generally no grammatical or lexical clues in the text to indicate that a specific sentence reflects the main idea of the reading. The reader must infer which sentence encompasses the ideas presented in all the other sentences.

In II.B.2.2. the reader must identify the objective, goal, or purpose of the author in writing the text. In these questions the purpose must be specific to the particular text and simply more than just the recognition of general function words (see II.A.13.).

Category II.B.2.3. requires the reader to select the best title for the text. In order to do this, s/he must be able to recognize the main idea and or purpose of the author and identify it in a phrase which probably does not appear in the reading.

In the following two categories, the reader should consider the style, language and format used by the author to identify the probable source of the text (Il.B.2.4.) and the readers for whom it was written (II.B.2.5.).

Categories II.B.2.6. and II.B.2.7. refer to the author's point of view. In the first, the reader should recognize the tone used by the author, e.g., irony, sarcasm, optimism, pessimism, etc. In the second, the reader should recognize the opinion expressed by the author, e.g., whether or not the author recommends a particular book or supports a specific theory. The reader should identify whether the author's opinion is positive or negative.

Category II.B.2.8. is similar to II.B.1.7., except that now the information on which the reader is asked to base his/her conclusion is implicit rather than explicit. In these questions, the reader may be asked to select the opposite of the information which appears in the text, to generalize from specific examples given in the text, or to choose an appropriate example of a general category described in the reading.

In the following two categories, the reader utilizes implicit information from the reading as a basis for inferring what might have preceded (ll.B.2.9.) or followed this text (II.B.2.10.). This is similar to Barrett's category 2.3. Inferring sequence.

In the final category the reader is asked to make an analogy between information contained in the passage and a new situation (II.B.2.11). In these questions, the reader must apply the information stated in the text to new examples.

Two aspects should be pointed out regarding part II of the taxonomy. First, the order in which the tasks appear does not necessarily imply order of difficulty of the item. In this sense, we adhere to the strict definition of the term taxonomy as being simply a classification system not a "hierarchical listing of skills" as identified by Elijah and Legenza, (1975:28). In multiple-choice items used to test reading comprehension, many factors affect the difficulty level. Besides the form which the stem takes, other elements such as the subject and style of the reading text and the reader's previous knowledge regarding this subject are only a few of the factors which may contribute to determining the level of difficulty.

Second, we are aware that differences of opinion exist regarding the definitions of inference and implicit information. According to Chikilanga (1992), implicit information is based on two sources: the propositional content of a text (i.e., the explicit information present in the text) and the reader's previous knowledge. Barrett's concept of inference is slightly broader than Chikilanga's description. She refers to inferential comprehension as being a combination of a synthesis of the literal content of a selection plus the reader's personal knowledge, intuition, and imagination. On the other hand, Pearson and Johnson (1978) distinguish between questions requiring information which is textually implicit ("answers that are on the page but…not so obvious" p. 157) or "scriptally" implicit ("a reader needs to use his or her script in order to come up with an answer" p. 57).

We agree that in order to respond to an inference question, the reader must elaborate on information which is explicitly present, i.e., "read between the lines." To do this, the reader must use all three types of schemata: linguistic, formal, and content. But it is also necessary to keep in mind that the purpose of these questions is to measure comprehension of a written text. We must, therefore, be careful to assure that our questions are not independent of the text. On the other hand, if specific information other than that which is presented in the text is needed to correctly answer the question, this information must be available to all the readers. For example, a question which requires the reader to recognize the possible source of a text assumes that all the readers are familiar with the characteristics which distinguish this particular type of reading. Figure 2 below shows how this taxonomy would be used to classify a testing item.

The Options

Each multiple–choice item in our system has four options. The classification of these options is based on statistical analysis. After each exam is administered, the answer sheets are analyzed using the LERTAP computer program, which determines the difficulty and the discrimination levels of each question and the effectiveness of the options. This information becomes part of our computerized item bank and is utilized in the selection of items to be used on future exams. In this way, we are able to produce exams at an appropriate level of difficulty containing items which have proven to distinguish between the efficient and less efficient readers.

It is important to point out that the reliability of the taxonomy was tested as measuring the degree of agreement among different professors who classified the same items. After a short period of training, the classifications reached independently by these professors coincided 90% of the time.

Conclusion

The taxonomy described here has been used to classify more than 1,200 items which form the basis of a computerized item bank of comprehension questions that are used to prepare valid and reliable exams to measure the ability of university students to read scientific and technical texts in English as a foreign language. Both the taxonomy and the computer program, which was also designed in the language department at the Simón Bolívar University, are sufficiently flexible to permit changes for practical and theoretical reasons. This flexibility was built into the system to accommodate the results of growing research in the area of applied linguistics and reading comprehension.

The program is extremely user friendly and presents a series of menus with various options designed to carry out exam-related functions and prepare different lists and tables useful for decision making. The user need only specify the requirements for a particular exam regarding text subject, objectives, difficulty levels, etc., and the program will provide a list of acceptable items fitting these characteristics.

The program also provides us with access to a data base which serves as a rich source of information for reading researchers. This data base contains a complete corpus of organized information which permits the study and evaluation of results produced by a specific item throughout the years and across groups of subjects.

The taxonomy has also been very useful to new teachers by helping them to focus on specific learner outcomes which they can emphasize in class. It also serves as a guide in the preparation of new items which can be incorporated into future exams.

It should be mentioned that the taxonomy presented here can also be used as a means for teaching. Once the students' reading problems have been detected, the student may access other data bases to practice with texts and questions similar to those in the item bank.

It is necessary to point out that we do not pretend to have solved all problems related to the evaluation of the reading comprehension process. This system does not include nor does it classify all cognitive abilities involved in the reading process. We simply hope to have provided one approach to help in the evaluation of the ability to read scientific and technical texts in English.

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Figure 1

THE TAXONOMY

I. TEXT

I.A. SUBJECT

I.A.1. Humanities and Social Sciences

I.A.1.1. Anthropology-Paleontology
I.A.1.2. Sociology
I.A.1.3. Psychology
I.A.1.4. Architecture
I.A.1.5. Education
I.A.1.6. Economics
I.A.1.7. Linguistics
I.A.1.8. Philosophy
I.A.1.9. Geography-Oceanography
I.A.1.10. Fine arts
I.A.1.11. History
I.A.1.x. Other

I.A.2. Physical Sciences

I.A.2.a. Pure

I.A.2.a.1. Physics
I.A.2.a.2. Chemistry
I.A.9.a.3. Mathematics
I.A.2.a.4. Astronomy
I.A.2.a.5. Geology
I.A.2.a.x. Other

I.A.2.b. Applied
I.A.2.b.1. Engineering
I.A.2.b.1.a. Mechanical
I.A.2.b.1.b. Electrical-Electronic
I.A.2.b.1.c. Civil
I.A.2.b.1.d. Materials
I.A.2.b.1.e. Chemical
I.A.2.b.1.f. Petroleum
I.A.2.b.1.g. Systems (computers)
I.A.2.b.1.x. Other
I.A.2.b.2. Meteorology
I.A.2.b.x. Other

I.A.3. Biological Sciences
I.A.3.1. Botany-Zoology
I.A.3.2. Ecology-Environment-Climate
I.A.3.3. Medicine-Health-Nutrition
I.A.3.4. Agronomy
I.A.3.5. Other

I.B. Rhetorical Patterns
I.B.1. Definition
I.B.2. Static description
I.B.3. Classification
I.B.4. Comparison-contrast
I.B.5. Chronology
I.B.6. Process
I.B.7. Cause-effect
I.B.8. Hypothesis
I.B.9. Argumentation
I.B.10. Exemplification
I.B.x. Other

I.C. Source
I.C.1. Magazine, newspaper, pamphlet
I.C.2. Reference book

I.C.3. Textbook

I.C.4. Journal

I.C.x. Other

I.D. Form

I.D.1. Paragraph(s)

I.D.1.1. Extract from article/book

I.D.1.2. Editorial

I.D.1.3. Report

I.D.1.4. Summary

I.D.1.5. Review-book, movie, play, television, etc.

I.D.1.6. Letter

I.D.1.7. Abstract

I.D.1.8. List of sentences

I.D.1.x. Other

I.D.2. Table

I.D.3. Graph

I.D.4. Dictionary page

I.D.5. Advertisement

I.D.6. Illustration

I.D.x. Other

II. STEM

II.A. MICROINFORMATION

II.A.1. Vocabulary-determine meaning from context

II.A.2. Determine referents

II.A.3. Select appropriate connector or usage of a given connector

II.A.4. Restate or paraphase specific information

II.A.5. Answer factual questions

II.A.6. Recognize definitions

II.A.7. Recognize comparison-contrast relationships

II.A.8. Recognize classification

II.A.9. Recognize sequence (process and chronology)

II.A.10. Recognize cause-effect

II.A.11. Recognize fact-hypothesis

II.A.12. Recognize description

II.A.13. Identify function of a text

II.A.x. Other

II.B. MACROINFORMATION

II.B.1. Analyze

II.B.1.1. Organize sentences

	II.B. 1.2.	Transcode information from text to graph or diagram
	II.B.1.3.	Verbalize from graph
	II.B.1.4.	Compare ideas in two texts
	II.B.1.5.	Recognize textual inconsistencies
	II.B.1.6.	Identify progression of text
	II.B.1.7.	Draw conclusion and/or deduction from explicit information
	II.B.1.8.	Predict from explicit information
	II.B.1.x.	Other
II.B.2.	Interpret	
	II.B.2.1.	Recognize main idea or topic sentence
	II.B.2.2.	Recognize author's purpose
	II.B.2.3.	Choose appropriate title
	II.B.2.4.	Identify source and/or type of text
	II.B.2.5.	Identify intended audience
	II.B.2.6.	Recognize tone of author
	II.B.2.7.	Recognize opinion of author
	II.B.2.8.	Draw conclusions and/or inferences from implicit information
	II.B.2.9.	Infer what preceded
	II.B.2.10.	Predict what follows from implicit information
	II.B.2.11.	Make analogy between information in passage and new situation
	II.B.2.x.	Other

Figure 2

Example of Item with Classification

At Albert Einstein College of Medicine in New York, Dr. Eli Seifter and co-workers have found that vitamin A and beta carotene, the chemical that gives carrots their color and from which the body makes vitamin A, can prevent or heal ulcers that have been provoked by heavy physical stress in experimental animals. Seifter suggests that vitamin A may shield the stomach and intestinal lining from erosion by gastric juices.

Which of the following is still

only hypothesis?

A. What beta carotene is.
B. That vitamin A prevents ulcers.
C. How vitamin A heals ulcers.*
D. What the body produces vitamin A from.

Text subject:	**I.A.3.3.**	Medicine-health-nutrition
Text functions:	**I.B.7.**	Cause-effect
	I.B.8.	Hypothesis
Text source:	**I.C.1.**	Magazine-newspaper-pamphlet
Text form:	**I.D.1.1.**	Extract from article/book
Stem:	**II.A.11.**	Recognize fact-hypothesis